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IN THE CLAIMS

1. (Previously Presented) An information receiving/display apparatus configured to receive and present information, comprising:
an information display plane, wherein the information display plane presents information which is proximately discernable with a proximately discernable sense, and wherein the information display plane presents information which is remotely discernable with a remotely discernable sense.
2. (Previously Presented) The information receiving/display apparatus according to claim 1 wherein said remotely discernable sense is one of a visual sense, an auditory sense, and an olfactory sense.
3. (Previously Presented) The information receiving/display apparatus according to claim 1 wherein said proximately discernable sense is one of a tactual sense, and a gustatory sense.
4. (Previously Presented) The information receiving/display apparatus according to claim 1 wherein the information which is proximately discernable and the information which is remotely discernable are given as functions of positions on said information display plane.
5. (Original) The information receiving/display apparatus according to claim 1 wherein information of sound, surface roughness, relative surface temperature or relative surface humidity is represented on said information display plane in addition to image information.
6. (Previously Presented) The information receiving/display apparatus according to claim 1 wherein the information which is proximately discernable can be obtained from both the front and the back of said information display plane.
7. (Original) The information receiving/display apparatus according to claim 1 wherein said information display plane is made of an optical fiber or an optical waveguide having a liquid core, and a fiber having a liquid core.

8. (Previously Presented) The information receiving/display apparatus according to claim 7 wherein image information is displayed on the information display plane by scattering light introduced into said core from one end or opposite ends of said optical fiber or waveguide by means of light scattering elements in said core at a selected portion in response to an image to be displayed.

9. (Previously Presented) An information receiving/display apparatus configured to receive sensory information other than visual information and audio information, in addition to visual information and/or audio information, comprising:

an information display plane, wherein the information display plane presents the sensory information other than visual information and audio information, in addition to the visual information and/or the audio information .

10. (Original) The information receiving/display apparatus according to claim 9 wherein said visual information, said audio information and the other sensory information are given as functions of positions on said information display plane.

11. (Original) The information receiving/display apparatus according to claim 9 wherein the other sensory information is tactual information.

12. (Original) The information receiving/display apparatus according to claim 9 wherein the other sensory information is information about relative temperature.

13. (Original) The information receiving/display apparatus according to claim 9 wherein the other sensory information is olfactory information.

14. (Original) The information receiving/display apparatus according to claim 9 wherein the other sensory information is composed of said image information.

15. (Original) The information receiving/display apparatus according to claim 9 wherein the other sensory information is tactual information, and the tactual information is composed of said image information.

16. (Original) The information receiving/display apparatus according to claim 9 wherein the other sensory information is information about relative surface temperature or information about relative surface humidity, and the relative surface temperature information or the relative surface humidity information is composed of said image information.

17. (Original) The information receiving/display apparatus according to claim 9 wherein said information display plane is made of an optical fiber or an optical waveguide having a liquid core, and a fiber having a liquid core.

18. (Previously Presented) The information receiving/display apparatus according to claim 17 wherein image information is displayed on the information display plane by scattering light introduced into said core from one end or opposite ends of said optical fiber or waveguide by means of light scattering elements in said core at a portion selected in response to an image to be displayed.

19. (Previously Presented) An information receiving/display apparatus configured to receive sensory information other than visual information and audio information, in addition to visual information and/or audio information, comprising:

an information display plane, wherein the information display plane presents the sensory information other than visual information and audio information, in addition to the visual information and/or the audio information ,

wherein said information display plane comprises an optical fiber or an optical waveguide having a liquid core for visual information, and a fiber for information for another sensory information having a liquid core,

wherein the information display plane is configured to display image information by scattering light introduced into said core from one end or opposite ends of said optical fiber or waveguide by means of light scattering elements in said core at a portion selected in response to an image to be displayed,

wherein the information display plane is configured to form a projection or produce a temperature change on a surface of said fiber at a portion selected in response to the image information to be displayed.

20. (Original) The information receiving/display apparatus according to claim 19 wherein said light scattering elements are bubbles.

21. (Original) The information receiving/display apparatus according to claim 20 wherein said bubbles are generated by bringing about cavitation in said liquid forming said liquid core of said optical fiber or optical waveguide.

22. (Original) The information receiving/display apparatus according to claim 20 wherein said bubbles are generated by propagating ultrasonic waves from the outer circumferential surface toward the center axis of said optical fiber or optical waveguide.

23. (Original) The information receiving/display apparatus according to claim 22 wherein said ultrasonic waves are generated by piezoelectric elements provided on the outer circumferential surface of said optical fiber or optical waveguide.

24. (Original) The information receiving/display apparatus according to claim 20 wherein said bubbles can be controlled in size.

25. (Original) The information receiving/display apparatus according to claim 20 wherein sizes of said bubbles are distributed substantially symmetrically about the center axis of said optical fiber or optical waveguide.

26. (Original) The information receiving/display apparatus according to claim 19 wherein said light scattering elements are fine particles.

27. (Original) The information receiving/display apparatus according to claim 26 wherein said fine particles are controlled in position by propagating ultrasonic waves from the outer circumferential surface toward the center axis of said optical fiber or optical waveguide.

28. (Original) The information receiving/display apparatus according to claim 27 wherein said ultrasonic waves are generated by piezoelectric elements provided on the outer circumferential surface of said optical fiber or optical waveguide.

29. (Original) The information receiving/display apparatus according to claim 27 wherein said fine particles are controlled in position and/or orientation by introducing an optical field into said optical fiber or optical waveguide from light control elements provided on the outer circumferential surface of said optical fiber or optical waveguide.

30. (Previously Presented) An information receiving/display apparatus configured to receive visual information and another sensory information other than visual information and audio information, in addition to visual information and/or audio information or in addition to visual information and audio information, comprising:

an information display plane, wherein the information display plane presents the information, wherein said information display plane comprises:

a plurality of optical fibers or optical waveguides having liquid cores for visual information;

a plurality of fibers for information for another sensory information having liquid cores;

a plurality of first control signal lines for visual information extending across said optical fibers or optical waveguides; and

a plurality of second control signal lines for said another sensory information extending across said fibers,

first piezoelectric elements on outer circumferential surfaces of said optical fibers or optical waveguides at intersections between said optical fibers or optical waveguides and said first control signal lines,

second piezoelectric elements on outer circumferential surfaces of said fibers at intersections between said fibers and said second control signal lines,

wherein the information display plane is configured to display image information by scattering light introduced into said cores from one end or opposite ends of selected one of said optical fibers or waveguides selected in response to image information to be displayed, by means

of bubbles that are generated by cavitation brought about in a liquid forming said core by propagating ultrasonic waves from the outer circumferential surface of said optical fiber or optical waveguide by driving said first piezoelectric element at the intersection between selected said optical fiber or optical waveguide and one of said first control signal lines selected in response to said image information to be displayed, and leading out the scattered light externally,

wherein the information display plane is configured to form a projection or produce a temperature change on a surface of one of said fibers selected in response to said image information to be displayed, by propagating ultrasonic waves from the outer circumferential surface of selected said fiber by driving one of said second piezoelectric elements at the intersection between selected said fiber and one of one of said second control signal lines selected in response to said image information to be displayed, and/or, said liquid forming said liquid core or molecules of a substance contained in said liquid being emanated from the surface of one of said fibers selected in response to said image information to be displayed.

31. (Original) The information receiving/display apparatus according to claim 30 wherein one of said piezoelectric elements at the intersection between selected said fiber and selected said second control signal line is driven to propagate ultrasonic waves from the outer circumferential surface of said fiber and thereby bring about cavitation and generate bubbles in said liquid forming said core, such that a projection is made as representation of tactual information on the surface of said fiber due to a pressure of bubbles.

32. (Original) The information receiving/display apparatus according to claim 30 wherein one of said piezoelectric elements at the intersection between selected said fiber and selected said second control signal line to propagate ultrasonic waves from the outer circumferential surface of said fiber to increase the temperature of said liquid forming the core as representation of relative surface temperature information.

33. (Original) The information receiving/display apparatus according to claim 30 wherein one of said piezoelectric elements at the intersection between selected said fiber and selected said second control signal line to propagate ultrasonic waves from the outer

circumferential surface of said fiber to emanate said liquid forming the core or molecules of a substance contained in said liquid as representation of relative surface humidity information or olfactory information.

34. (Original) The information receiving/display apparatus according to claim 30 wherein said optical fibers or optical waveguides have light sources at one-side ends or opposite ends thereof.

35. (Previously Presented) The information receiving/display apparatus according to claim 34 wherein each of said light sources is a semiconductor laser.

36. (Previously Presented) The information receiving/display apparatus according to claim 30, wherein said optical fibers or optical waveguides include those for red, those for green and those for blue, said optical fibers or optical waveguides for red having red emitting light sources at one-side ends or opposite ends thereof, said optical fibers or optical waveguides for green having green emitting light sources at one-side ends or opposite ends thereof, and said optical fibers or optical waveguides for blue having blue emitting light sources at one-side ends or opposite ends thereof.

37. (Original) The information receiving/display apparatus according to claim 36 wherein said red emitting light sources, said green emitting light sources and said blue emitting light sources are semiconductor lasers.

38. (Original) The information receiving/display apparatus according to claim 30 wherein said optical fibers, or optical waveguides, and said fibers are arranged to form a concave plane as a whole.

39-40. (Canceled)

41. (Previously Presented) A method for receiving and displaying information comprising:

receiving sensory information other than visual information and audio information, in addition to visual information and/or audio information; and

presenting the information on an information display plane, wherein said information display plane comprises an optical fiber or an optical waveguide having a liquid core for visual information, and a fiber for information for another sensory information having a liquid core,

wherein the information display plane is configured to display image information by scattering light introduced into said core from one end or opposite ends of said optical fiber or waveguide by means of light scattering elements in said core at a portion selected in response to an image to be displayed, and thereby leading out it externally,

wherein the information display plane is configured to form a projection or produce a temperature change on a surface of said fiber at a portion selected in response to image information to be displayed.

42. (Previously Presented) A display configured to receive visual information for a remotely discernible sense and tactual information for a proximately discernible sense, comprising:

an information display plane, wherein the information display plane is configured to form an image in response to the visual information and a projection in response to the tactual information.

43. (Previously Presented) The display according to claim 42 wherein the remotely discernible sense is a visual sense.

44. (Previously Presented) The display according to claim 42 wherein the proximately discernible sense is a tactual sense.

45. (Previously Presented) The display according to claim 42 wherein information of sound, surface roughness, relative surface temperature or relative surface humidity is represented on said information display plane.

46. (Previously Presented) The display according to claim 42 wherein the tactual information can be obtained from both the front and the back of said information display plane.

47. (Previously Presented) The display according to claim 42 wherein the information display plane comprises an optical fiber or an optical waveguide having a liquid core.

48. (Previously Presented) The display according to claim 47 wherein the information display plane forms an image by scattering light introduced into said liquid core using a light scattering element at a selected portion of the optical fiber.

49. (Previously Presented) The display according to claim 47 wherein the information display plane comprises a fiber for tactual representation having a liquid core and a cavitation forming element at a selected portion of the fiber, wherein the cavitation forming element is capable of being driven to bring about cavitation and generate bubbles in the liquid core of the fiber in order to form a projection on the surface of said fiber representing the tactual information.

50. (Previously Presented) A display configured to receive visual information for a remotely discernible sense and olfactory information for a proximately discernible sense, comprising:

an information display plane, wherein the information display plane is configured to form an image in response to the visual information and emit a vapor in response to the olfactory information.

51. (Previously Presented) The display according to claim 50 wherein the remotely discernible sense is a visual sense.

52. (Previously Presented) The display according to claim 50 wherein the proximately discernible sense is a tactual sense.

53. (Previously Presented) The display according to claim 50 wherein information of sound, surface roughness, relative surface temperature or relative surface humidity is represented on said information display plane.

54. (Previously Presented) The display according to claim 50 wherein the olfactory information can be obtained from both the front and the back of said information display plane.

55. (Previously Presented) The display according to claim 50 wherein the information display plane comprises an optical fiber or an optical waveguide having a liquid core.

56. (Previously Presented) The display according to claim 50 wherein the image is formed by scattering light introduced into said liquid core by means of light scattering elements at a selected portion of the optical fiber.

57. (Previously Presented) The display according to claim 55 wherein the information display plane comprises a fiber for olfactory representation having a liquid core and a cavitation forming element at a selected portion of the fiber, wherein the cavitation forming element is capable of being driven to bring about cavitation and generate bubbles in the liquid core of the fiber in order to form and emit a vapor through the surface of said fiber representing the olfactory information.

58. (New) An information receiving/display apparatus configured to receive one of audio information and visual information and to receive one of olfactory information, gustatory information, and tactile information, comprising:

an information display plane, wherein the information display plane displays one of the audio information and visual information and displays one of olfactory information, gustatory information, and tactile information.

59. (New) The information receiving/display apparatus according to claim 58 wherein the information display plane displays the tactile information by forming a projection on the display plane.

60. (New) The information receiving/display apparatus according to claim 58 wherein the information display plane displays the olfactory information by releasing vapor from the display plane.

61. (New) An information receiving/display apparatus configured to receive one of audio information, visual information, olfactory information, gustatory information, and tactile information, comprising:

an information display plane, wherein the information display plane displays one of the audio information and visual information and releases vapor from the display plane in response to one of the audio information, the visual information, the olfactory information, the gustatory information, and the tactile information.

62. (New) An information receiving/display apparatus configured to receive one of audio information, visual information, olfactory information, gustatory information, and tactile information, comprising:

an information display plane, wherein the information display plane displays one of the audio information and visual information and forms a projection on the information display plane in response to one of the audio information, the visual information, the olfactory information, the gustatory information, and the tactile information.